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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,392	03/05/2002	Ioannis Katsavounidis	INTV.012A	8446
7590 12/28/2005			EXAMINER	
Rosenberg Klein & Lee 3458 Ellicott Center Drive-Suite 101 Ellicott City, MD 21043			WONG, ALLEN C	
			ART UNIT	PAPER NUMBER
			2613	
DATE MAILED: 12/28/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/092,392

Applicant(s)

KATSAVOUNIDIS ET AL.

Examiner

Allen Wong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11,13-22 and 24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11,13-22 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/12/05 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1, 11 and 22 have been read and considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-3, 5-7, 11, 15, 16, 18-20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rhee (6,289,054) in view of Glaise (6,097,725).

Regarding claims 1, and 3, Rhee discloses a method of providing forward error correction (FEC) to a frame, the method comprising the steps of:

packetizing the data frame into a plurality of frame packets (col.6, ln.10-23, note in fig.4, note adapter 414 computes the packets for preparation of packetization and transmission of packet data at element 408);

selecting portions of packet data from each of the plurality of frame packets, said selected portions being less than an entirety of a corresponding frame packet (col.6, ln.10-23, note in fig.4, the adapter provides data to the transmitter 408 for selected packet data portions);

generating a forward error correction code for the selected portions of packet data (col.6, ln.10-19; FEC bits are generated); and

transmitting separately the forward error correction code and the plurality of frame packets, the packet containing the forward error correction code being identified with a user data identifier code (fig.4, element 408).

Rhee does not specifically disclose the simultaneously concatenating only the selected portions of packet data from each of the plurality of frame packets into a concatenated bit field. However, Glaise teaches the simultaneously concatenating only the selected portions of packet data from each of the plurality of frame packets into a concatenated bit field (col.6, ln.36 to col.7, ln.6; Glaise discloses that data can be simultaneously gathered or concatenated). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Rhee and Glaise as a whole for robustly reducing costs during the high-speed transmission of data packets in applications where time is limited while maintaining accuracy of the transmitted data (col.2, ln.60-62).

Regarding claims 2 and 16, Rhee discloses wherein the transmission of the forward error correction bits in the separate packet is MPEG-4 compliant (col.5, ln.19).

Regarding claims 5 and 18, Rhee discloses wherein the forward error correction bits are generated using a systematic code (col.6, ln.19-23).

Regarding claims 6 and 19, Rhee discloses wherein the selected portions of packet data includes motion vector data and DCT data (col.5, ln.18-20; MPEG encoding/decoding must utilize motion vector data and DCT data).

Regarding claims 7 and 20, Rhee discloses wherein the selected portions of packet data includes only header data, motion vector data and DCT data (col.5, ln.18-20; MPEG encoding/decoding must utilize header data, motion vector data and DCT data).

Regarding claims 11, 15 and 22, Rhee discloses an error correction generation circuit, comprising:

- a processor coupled to a processor readable memory (col.5, ln.2-10; note computer or workstation to execute instructions embodied in a computer readable medium);

- a first instruction sequence stored in the processor memory and operable to cause the processor to select portions of packet data from each of a plurality of frame packets of a corresponding packetized data frame, said selected portions being less than an entirety of a corresponding frame packet (col.6, ln.10-23, note in fig.4, the adapter provides data to the transmitter 408 for selected packet data portions);

a second instruction sequence stored in the processor readable memory and operable to cause the processor to generate forward error correction data for the selected portions of packet data (col.6, ln.10-19; FEC bits are generated);

a third instruction sequence stored in the processor readable memory and operable to cause the processor to store the forward error correction data in a packet separate from the plurality of frame packets (fig.4, element 408 stores the FEC information); and

a fourth instruction sequence stored in the processor readable memory and operable to cause the processor to identify the separate packet with a data identifier code (col.6, ln.10-23; note element 414 can identify the first packet and determine the FEC correction if necessary).

Rhee does not specifically disclose the simultaneously concatenating only the selected portions of packet data from each of the plurality of frame packets into a concatenated bit field. However, Glaise teaches the simultaneously concatenating only the selected portions of packet data from each of the plurality of frame packets into a concatenated bit field (col.6, ln.36 to col.7, ln.6; Glaise discloses that data can be simultaneously gathered or concatenated). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Rhee and Glaise as a whole for robustly reducing costs during the high-speed transmission of data packets in applications where time is limited while maintaining accuracy of the transmitted data (col.2, ln.60-62).

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1. Claims 4, 10, 17 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rhee (6,289,054) and Glaise (6,097,725) in view of Lewis (6,601,209).

Regarding claims 4, 10, 17 and 24, Rhee does not specifically disclose wherein the forward error correction bits are generated using a BCH code. However, Lewis teaches the use of BCH code for error correction of data during transmission (col.3, ln.54-63). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Rhee, Glaise and Lewis, as a whole, for accurately, efficiently, reliably transmit compressed MPEG data while maintaining high quality of the transmitted video data (Lewis col.2, ln.38-41).

2. Claims 8, 9, 13 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rhee (6,289,054) and Glaise (6,097,725) in view of Tan (6,075,576).

Regarding claims 8-9, 13 and 21, Rhee does not specifically disclose further comprising: setting a flag indicating that a fixed Video Object Plane (VOP) increment is to be used; and providing a corresponding fixed time increment value. However, Tan teaches the use of VOP time increment data (see figs.3A, 3B and col.4, ln.44-67; note VOPs are disclosed and that clearly, VOPs are incremented accordingly in a similar sequential manner as I, P and B frames, where corresponding fixed offset exists to provide a fixed time increment value). Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings of Rhee, Glaise and Tan, as a whole, for accurately, efficiently coding and decoding video image data and coefficients, while

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maintaining high image quality when synchronizing VOPs of different rates (Tan col.2, ln.1-16).

3. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rhee (6,289,054) and Glaise (6,097,725) in view of Watanabe (6,084,888).

Regarding claim 14, Rhee discloses the use of MPEG-4 (col.5, ln.18-20). It is well known in the art that a packet must have a header extension code. However, if one is not convinced, Watanabe teaches the use of a Header Extension Code (HEC) in every packet in a first sequence of packets (fig.2, note header extension codes are used). Therefore, it would have been obvious to one of ordinary skill in the art to apply the teachings of Rhee, Glaise and Watanabe, as a whole, for improving the transmission efficiency of packetized data of coded data while accurately encoding the video data by reducing header data errors (Watanabe col.8, ln.57-63).

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen Wong whose telephone number is (571) 272-7341. The examiner can normally be reached on Mondays to Thursdays from 8am-6pm Flextime.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571) 272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Allen Wong
Primary Examiner
Art Unit 2613

AW
12/22/05